

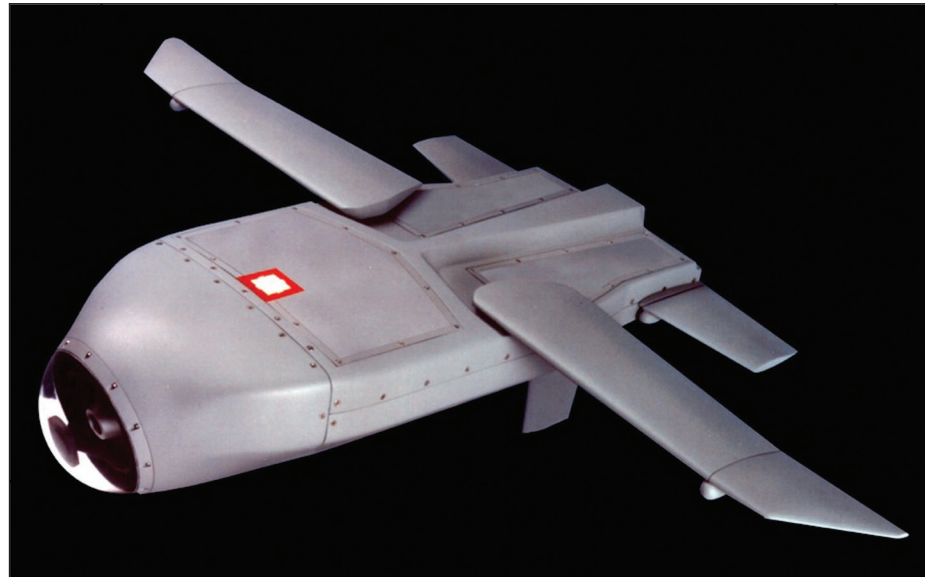


Air Force Research Laboratory|AFRL

Science and Technology for Tomorrow's Air and Space Force

Success Story

POWERED LOCAAS HITS TARGET IN FIRST COMPLETE SYSTEM FLIGHT TEST



The Munitions Directorate successfully flight tested its powered Low Cost Autonomous Attack System (LOCAAS), equipped with a multimode warhead. This marked the first time the system autonomously located, attacked, and fired a warhead at a target, meeting all test objectives.



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Accomplishment

The successful LOCAAS flight test represents a significant step in demonstrating an autonomous wide-area-search, miniature-munition capability for the warfighter. The technology demonstrated today offers the potential to transform the battlefield in the near term.

In this test, a test aircraft released LOCAAS over the Eglin Air Force Base, Florida range. After release and flying under its own power, LOCAAS used its onboard Global Positioning System/Inertial Navigation System to navigate to two waypoints prior to searching for the target—a relocatable surface-to-air missile (SAM) launcher. The Laser Radar (LADAR) seeker, automatic target acquisition algorithms, and guidance and control software worked together to provide the multimode warhead and fuze with information to time the arming sequence and mode selection, and time to detonate.

In the target area, LOCAAS rejected a non-target military vehicle intended to confuse the system, as could occur in an actual battlefield scenario. The LOCAAS acquired and correctly identified the target, tracked it, and detonated the warhead above the target at the appropriate time and location. Fragments from the warhead impacted and penetrated the SAM transporter/launcher/radar system.

Background

Developed in conjunction with Lockheed Martin Missiles and Fire Control, LOCAAS is compatible with F-16, F-22, Joint Strike Fighter, B-1, and B-2 aircraft. The LOCAAS is a miniature, autonomous, powered munition, capable of broad area search, identification, and destruction of a range of mobile ground targets.

LOCAAS is a low-cost LADAR sensor coupled with a multimode warhead and a maneuvering airframe to produce a high-performance submunition. LOCAAS can detonate the warhead as a long-rod penetrator, an aerostable slug, or as fragments, based on the hardness of the target. The LADAR allows LOCAAS to automatically determine target aimpoint and warhead selection. The powered LOCAAS uses a small turbojet engine to power the vehicle.

Additional information

To receive more information about this or other activities in the Air Force Research Laboratory, contact TECH CONNECT, AFRL/XPTC, (800) 203-6451 and you will be directed to the appropriate laboratory expert. (03-MN-08)

Munitions
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